

Rejections Under 35 U.S.C. §103

In the Office Action the Examiner rejected claims 1-5, 8-9, 12-14, and 23-37 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,966,191 issued to Lee ("Lee") in view of U.S. Patent No. 5,442,470 issued to Hashimoto ("Hashimoto"). Applicants respectfully traverse these rejections and reconsideration is hereby requested.

Amended claim 1 is allowable as it recites a combination of elements including, for example, "a mold frame for receiving said liquid crystal display panel and said back light assembly, wherein the mold frame includes a receiving recess for receiving a portion of the flexible circuit board; a chassis coupled to said mold frame, for fixing said liquid crystal display panel and said back light assembly to said mold frame; and a support member for supporting a portion of the flexible circuit board in the receiving recess." None of the references either singly or in combination recites at least these features.

The Examiner admits that Lee is deficient as a reference as it does not disclose "a support means for supporting ... [the] flexible circuit board" (Office Action at 3.) In order to cure these deficiencies it appears the Examiner is relying on Hashimoto in stating "a frame member, 8, ... has a moderate level of resiliency for nipping the liquid crystal display panel, 1, and the circuit board, 3, (col. 5, lines 58-68)(Applicant's support means for supporting the flexible circuit board towards the mold frame) to provide greater durability and resistance to vibration and impacts." (Office Action at 4.) However, these assertions do not cure the deficiencies of Lee as the limitations of claim 1 have not been established.

Additionally, the Examiner purports that claims 5, 8-9,12-14, and 23-26 are obvious by stating "[a] reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill (in) the art, including nonpreferred embodiments (MPEP 2123)." (Office Action at 6-9.) Applicants respectfully disagree and believe the Examiner has mischaracterized this statement as recited in the M.P.E.P §2123 with regard to the references. As there is no suggestion in either Hashimoto or Lee for the combination of elements required by claims 5, 8-9,12-14, and 23-26.

Referring to the M.P.E.P. § 2123, having a heading entitled, "Rejection Over Prior Art's Broad Disclosure Instead of Preferred Embodiments" and the subheading for entitled "Patents are relevant as prior art for all they contain." The Examiner's assertions are inconsistent with this section of the M.P.E.P. As the references do not disclose or suggest the combination of elements required by claims 5, 8-9,12-14, and 23-26. That is, there is no disclosure in the references for the features required by claims 5, 8-9,12-14, and 23-26. Accordingly, the it is improper, as the Examiner suggests, to render all of the combination of elements in the claims obvious.

Rather, it appears the Examiner is relying on Official Notice to meet the claim elements not supported in either Lee or Hashimoto. It is noted, that the Examiner may rely Official Notice to cure the deficiencies of the Hashimoto and Lee. Accordingly, Applicants seasonably traverse any use of the Official Notice in the rejection.

The Examiner may take official notice of facts outside of the record which are capable of instant and unquestionable demonstration as being "well-known" in the art. *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). As set forth in M.P.E.P. § 2144.03, if an applicant traverses an assertion made by an Examiner while taking official notice, the Examiner

should cite a reference in support of their assertion. Accordingly, Applicants respectfully request a reference to support of the Examiner's Allegations.

Regardless, neither Hashimoto nor Lee teaches or suggests a combination of elements including, for example, "a mold frame for receiving said liquid crystal display panel and said back light assembly, wherein the mold frame includes a receiving recess for receiving a portion of the flexible circuit board; a chassis coupled to said mold frame, for fixing said liquid crystal display panel and said back light assembly to said mold frame; and a support member for supporting a portion of the flexible circuit board in the receiving recess" as required by independent claim 1. Accordingly, Applicants respectfully submit that claim 1, and claims 3-23, which depend from claim 1 are allowable over the cited references and request withdrawal of the rejection under 35 U.S.C. § 103.

Amended independent claims 25-27 are allowable as these claims recite a combination of element, including, for example, "a mold frame for receiving the liquid crystal display panel and the back light assembly, wherein the mold frame includes a receiving portion." None of the cited references singly or in combination teaches or suggests at least these features. Accordingly, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103.

CONCLUSION


All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete response has been made to the outstanding Office Action and, as such, claims 1 and 3-27 are in condition for allowance. If the Examiner believes,

for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that any extensions of time or fees for net addition of claims are required at this moment. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 23-1951. Please credit any overpayment to deposit Account No. 23-1951.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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APPENDIX A

The "marked-up" version of the amended claims is as follows.

1. (Twice Amended) A liquid crystal display device, comprising:
a liquid crystal display panel;
a flexible circuit board attached to said liquid crystal display panel, for applying driving signals to said liquid crystal display panel;
a back light assembly for providing a light to said liquid crystal display panel;
a mold frame for receiving said liquid crystal display panel and said back light assembly,
wherein the mold frame includes a receiving recess for receiving a portion of the flexible circuit board;
a chassis coupled to said mold frame, for fixing said liquid crystal display panel and said back light assembly to said mold frame; and
a support [means] member for supporting [said] a portion of the flexible circuit board [towards said mold frame] in the receiving recess.
3. (Twice Amended) The liquid crystal display device [according to] of claim [2]3, wherein a recessed portion of the receiving recess is formed at the upper end of [the] an outer side surface of a side wall of the mold frame is deeper than a recessed portion of the receiving recess at the lower end thereof.
4. (Twice Amended) The liquid crystal display device [according to] of claim [2]3, wherein a recessed portion of the receiving recess is deeper to receive a protruding portion which is attached to the flexible circuit board.

5. (Twice Amended) The liquid crystal display device [according to] of claim 1, wherein the support [means]member includes [is] a separating support member for closely supporting a bottom surface of the flexible circuit board, the separating support member [which] is inserted into the receiving recess [and is bent towards attached the outside of a side wall of the mold frame, for locating the flexible circuit board in the receiving recess, the separating support member being separated from the chassis].

6. (Twice Amended) The liquid crystal display device [according to] of claim 5, wherein at least one [an] engaging recess having a predetermined depth [are] is formed at [both ends] an end of the receiving recess; and
at least one [an] engaging hole having a predetermined depth formed in [a surface of] the engaging recess.

7. (Twice Amended) The liquid crystal display device [according to] of claim 6, wherein the separating support member comprises a fixing body having an inclined surface, an engaging plate formed on both sides of the fixing body and inserted into the engaging recess, and an engaging boss formed on the engaging plate and inserted into the engaging recess.

8. (Twice Amended) The liquid crystal display device [according to] of claim 1, wherein the support [means]member is a fixing film[, of which] having at least one end [is] attached to [the] an inner surface of the chassis and having [the] another other end [is] fixed to

[the]a bottom surface of the mold frame for [pressing]supporting said flexible circuit board [towards the inner side of the receiving recess].

9. (Twice Amended) The liquid crystal display device [according to] of claim 8, further comprising a bonding material [or a bonding tape] for fixing the bottom surface of the mold frame and the end portion of the fixing film [which is] opposite to the bottom surface of the mold frame.

10. (Twice Amended) The liquid crystal display device [according to] of claim 8, wherein a boss is formed on a bottom surface of the mold frame, and a penetrating hole for fixing the fixing film [by inserting the boss into the penetrating hole] is formed in a portion of the fixing film which corresponds to the boss.

11. (Amended) The liquid crystal display device [according to] of claim 8, wherein a plurality of flexible circuit boards are attached to one side of the liquid crystal display device, and one side end which is attached to the chassis among a plurality of fixing films which correspond to the number of the flexible circuit boards is protruded as the number of the receiving recess, and the other side end which is attached to the mold frame among the fixing films is integrally connected.

12. (Twice Amended) The liquid crystal display device [according to] of claim 1, wherein a resilient member [which] for fixing [fixes] the flexible circuit board is installed

between a rear side surface of the flexible circuit board which is received in the receiving recess and an inner side surface of the chassis.

13. (Twice Amended) The liquid crystal display device [according to] of claim 1, wherein the support [means]member is [an integral support member which is] fixed to the chassis [which is] provided at a side wall portion of the chassis which corresponds to the flexible circuit board.

14. (Twice Amended) The liquid crystal display device [according to] of claim 13, wherein the [integral] support member is comprised of a resilient material.

15. (Twice Amended) The liquid crystal display device [according to] of claim 13, wherein the [integral] support member has an L-shape portion[,] and a horizontal portion, the horizontal portion [thereof] is attached to an inner side wall of the chassis [to resiliently]for supporting [support] a rear surface of the flexible circuit board.

16. (Twice Amended) The liquid crystal display device [according to] of claim 13, further comprising a protecting cover[, of which]having one end [is] fixed to [the] a side wall portion of the chassis at a position higher than the [integral] support member [portion between the flexible circuit board and the integral support portion,] and which is extended to one end of a bottom surface portion of the mold frame, covering the flexible circuit board.

17. (Twice Amended) The liquid crystal display device [according to] of claim 16, further comprising a protecting cover [fixing means] for fixing the other end of the protecting cover to the bottom surface portion of the mold frame.

18. (Twice Amended) The liquid crystal display device [according to] of claim 13, further comprising a printed circuit board cover for protecting a bottom surface portion to which an integrated circuit board is attached and a bottom surface portion to which the flexible circuit board is attached, the printed circuit board cover being provided on a bottom surface of the mold frame.

19. (Twice Amended) The liquid crystal display device [according to] of claim 13, wherein the [integral] support member includes [is] a bending piece which is [integrally] fixed to [the] a side wall portion of the chassis [which corresponds] substantially corresponding to a portion [to which] where the flexible circuit board is attached and is bent to support the flexible circuit board from the side wall portion of the chassis.

20. (Twice Amended) The liquid crystal display device [according to] of claim 19, wherein the bending piece comprises a horizontal portion which is fixed to a central portion of the side wall portion of the chassis and an inclined portion which is provided at an end of the horizontal portion [to resiliently make contact with the flexible circuit board and] for supporting [support] the flexible circuit board.

21. (Twice Amended) The liquid crystal display device [according to] of claim 20, further comprising a support portion for [resiliently support]supporting the inclined portion[, which is] formed at an end of the inclined portion and [is] extended to the bottom surface portion of the mold frame.

22. (Twice Amended) The liquid crystal display device [according to] of claim 21, wherein the support portion has a hook shape.

23. (Twice Amended) The liquid crystal display device [according to] of claim 1, further comprising [wherein the liquid crystal display device comprises] an integrated printed circuit board having a source portion for providing a data driving signal to the liquid crystal display panel through a data line of the liquid crystal display panel and a gate portion for providing a gate driving signal to a gate line of the liquid crystal panel, and the flexible circuit board is a gate side flexible circuit board which is attached to the gate side of the liquid crystal display panel to transfer the gate driving signal from the integrated printed circuit board to the liquid crystal display panel.

24. (Amended) A liquid crystal display device, [composing]comprising:
a liquid crystal display panel;
a back light assembly for providing a light to the liquid crystal display panel;
a mold frame for receiving the liquid crystal display panel and the back light assembly,
wherein the mold frame includes a recess portion;

an integrated printed circuit board attached to a first portion of the liquid crystal panel, the integrated printed circuit board having a first part for providing image signals and a second part for providing first driving signals to the liquid crystal display panel;

a first flexible circuit board for connecting the integrated printed circuit board to a first portion of the liquid crystal display panel:

a second flexible circuit board attached to a second portion of the liquid crystal display panel, for applying second driving signals to the liquid crystal display panel, a portion of the flexible circuit board is is [being bent] arranged at [in] a predetermined angle towards an outside of [a side well] the recess portion of the mold frame;

a chassis coupled to the mold frame, for fixing the liquid crystal display panel and the back light assembly to the mold frame; and

a support means disposed between the chassis and the flexible circuit board, for supporting the flexible circuit board towards the outside of the side wall of the mold frame.

25. (Amended) A liquid crystal display device, [composing]comprising:

a liquid crystal display panel;

a back light assembly for providing a light to the liquid crystal display panel;

a mold frame for receiving the liquid crystal display panel and the back light assembly, wherein the mold frame includes a recess portion;

a flexible circuit board attached to a portion of the liquid crystal display panel, for applying driving signals to the liquid crystal display panel, a portion of the flexible circuit board being [bent] arranged substantially perpendicular to the liquid crystal display panel to be opposite to an outside of a side wall of the mold frame; and

a chassis coupled to the mold frame, for [axing] fixing the liquid crystal display panel and the back light assembly to the mold frame.

26. (Amended) A liquid crystal display device, comprising:

a liquid crystal display panel;

a back light assembly for providing a light to the liquid crystal display panel;

a mold frame for receiving the liquid crystal display panel and the back light assembly,

wherein the mold frame includes a recess portion;

an integrated printed circuit board attached to a first portion of the liquid crystal panel, the integrated printed circuit board having a first part for providing image signals and a second part for providing first driving signals to the liquid crystal display panel;

a first flexible circuit board for connecting the integrated printed circuit board to a first portion of the liquid crystal display panel;

a second flexible circuit board attached to a second portion of the liquid crystal display panel, for applying second driving signals to the liquid crystal display panel, a portion of the second flexible circuit board being bent perpendicular to the liquid crystal display panel to be opposite to an outside of a side [wail]wall of the mold frame and a portion of the second flexible circuit board arranged in the recess portion; and

a chassis coupled to the mold frame, for fixing the liquid crystal display panel and the back light assembly to the mold frame.

27. (Amended) A liquid crystal display device, comprising:

a liquid crystal display panel;

a back light assembly for providing a light to said liquid crystal display panel;

a mold frame for receiving said liquid crystal display panel and said back light assembly,

a portion of the mold frame includes a recess portion;

a flexible circuit board attached to said liquid crystal display panel, for applying driving signals to said liquid crystal display panel, a portion of the flexible circuit board being bent in a predetermined angle towards an outside of a side wall of said mold frame;

a chassis coupled to said mold frame, for fixing said liquid crystal display panel and said back light assembly to said mold frame; and

a support means disposed between the chassis and the flexible circuit board to be coupled with the first portions of the outside of the side wall of the mold frame, for supporting the flexible circuit board to second portions of the outside of the side wall of said mold frame.

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